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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,121	03/15/2001	Daniel Lieberman	7544-PA03	4629

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EXAMINER

KIM, PAUL D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 11/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/809,121

Applicant(s)

LIEBERMAN, DANIEL

Examiner

Paul D Kim

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8, 14, 15, 22-25 and 31-34 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 1-8, 14, 15, 22-25 and 31-34 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is a response to the amendment filed on 9/25/2002.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8, 14, 15, 22-25 and 31-34 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitation "applying an etchant in an inverse pattern to said predetermined pattern to said metal layer" in lines 3-4 appears to recite new matter. The limitations on claim 1 were not described in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8, 14, 15, 22-25 and 31-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re. Claim 1: The limitation "applying an etchant in an inverse pattern... comprising said antenna" in lines 3-6 renders the claim vague and indefinite. According

to the claimed invention, the etchant is applied to the predetermined pattern of the metal layer and then all metal other than metal in predetermined pattern are removed. The etchant described in the claimed invention as shown in Fig. 7 is a liquid type of etchant. It is unclear as to how the etchant is applied only to the predetermined pattern of the metal layer and how all metal other than metal in predetermined pattern are only removed. Also, after the liquid etchant is applied to the predetermined pattern of the metal layer, does the liquid etchant stay only in the predetermined pattern of the metal layer on the surface of the substrate? It is unclear so as to how the liquid etchant stay only in the predetermined pattern without using any masking tool to protect the predetermined pattern of the metal layer.

Re. Claim 2: The limitation "said substrate comprises a plurality of surface areas" in lines 1-2 renders the claimed vague and indefinite. According to claim 1 in line 2, the substrate has only one surface area.

The limitation "a portion of said metal layer" in line 2 renders vague and indefinite. It is unclear whether the removed portion is the same in line 4 in claim 1 or not. Clarification is required.

The limitation "removal within each of said surface areas... an individual surface area" in lines 2-4 renders the claimed vague and indefinite. It is unclear so as to remove the portion of the metal layer within each of said surface areas and also unclear so as to form a plurality of the antennas with each antenna of said plurality being disposed within an individual surface area since there is only one antenna formed according to claim 1.

Re. Claim 3: The limitation "a single antenna" in lines 2-3 renders vague and indefinite. It is unclear whether the single antenna is the same antenna recited as a radio frequency antenna in line 1 of claim 1.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6, 14, 15, 31, 33 and 34 are, as best understood, rejected under 35 U.S.C. 102(b) as being anticipated by Horne (US PAT. 5,861,226).

Horne teaches a method of fabricating a resonant micromesh filter having conductive antenna elements comprising steps of: applying a metal layer (54) on a dielectric substrate (52) (see Fig. 15-18); and removing the metal layer (exposed part 108, for example) to form an antenna array (see Fig. 1-5), which meets all of applicant's limitations. (col. 5, lines 9-42, col. 7, lines 42-50 and col. 8, lines 11-27).

Horne teaches the ion etching process. Inasmuch as Applicant's does not differentiate the type of etching employed. Horne, indeed anticipates claims 1-6, 14, 15, 31, 33 and 34.

Re. Claims 14 and 15: Horne '226 also teaches that the metal layer deposits on both side of the substrate as shown in Fig. 12.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7 and 8 are, as best understood rejected under 35 U.S.C. 103(a) as being unpatentable over Horne in view of Grabau (US PAT. 6,147,662).

Horne teaches all the claimed invention as set forth above with the exception of material used for the substrate. Grabau teaches Radio frequency identification elements having a substrate made by a paper web for producing inexpensive RFID elements (col. 1, lines 20-32 and col. 2, lines 20-29). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify a dielectric substrate of Horne by using a paper web for the substrate as taught by Grabau '662 for the purpose of enhancing simplicity and speed of the construction of the RF product and reducing cost.

10. Claim 32 is, as best understood rejected under 35 U.S.C. 103(a) as being unpatentable over Horne (US PAT. 5,861,226).

Horne teaches all the claimed invention as set forth above exception of different metal densities or thicknesses of the substrate.

It is held to be mere design choice to provide substrate having different metal densities or thicknesses because Applicant has not disclosed that ~~the~~ etching the substrate as recited in the claimed invention provides an advantage, is used for a

particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with Horne etching with different metal densities or thicknesses of the substrate as recited in the claimed invention would perform equally well such as welding the wire with the etching process in Horne. Therefore, it would have been an obvious matter of design choice to modify the substrate of Horne to obtain the invention as specified in claim 1.

***Allowable Subject Matter***

11. Claims 22-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

12. Applicant's arguments filed 9/25/2002 have been fully considered but they are not persuasive. Applicant argues that the prior art of record fails to disclose the claimed invention such as applying an etchant directly to the metal layer. No mask or ion generators are required. Horne teaches all the claimed invention as set forth above including an etching step. Horne also applies an etchant in an inverse pattern to the predetermined pattern to the metal layer. Also, there is no such a limitation in the claims that a mask or ion generators are not used during the etchant applying step. Moreover, the limitation "applying an etchant in an inverse pattern to said predetermined pattern to

said metal layer” in lines 3-4 of claim 1 recites new matter. This limitation in claim 1 is not discussed in the specification.

13. Applicant's arguments with respect to claims 1-8, 14, 15, 22-25 and 31-34 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356. The examiner can normally be reached on Tuesday-Friday between 7:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's



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supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-9835 for regular communications and 703-305-9835 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.

*CJA*  
**CARL J. ARBES**  
**PRIMARY EXAMINER**

pdk  
November 19, 2002